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Dimensions

1/4 MALE NPT WITH 3/4 [19.05] WRENCHING HEX

1/2 FEMALE NPT
CONDUIT ENTRY

3X 1/8 [3.18]
2X 5/16 [7.93]
1/4-17/32 [115.09]
Ø 4-17/32 [127.00]
Ø 5 [25.40]
3-15/32 [88.11]
3-1/16 [77.89]
1-5/64 [26.16]
27/64 [21.43]
9/32 [7.14]
SPECIFICATIONS
Service: Compatible liquids and gases.
Wetted Materials: 316L SS.
Housing: Glass filled plastic.
Accuracy: ±1% of F.S. including linearity, hysteresis, and repeatability (indicator and transmitter).
Stability: < ± 2% of F.S. per year.
Pressure Limits: Ranges up to 6,000 psi: 1.5 x range; 8,000 psi range: 10,000 psi.
Temperature Limits: Ambient: 20 to 140°F (-6.6 to 60°C); Process: 0 to 176°F (-18 to 80°C).
Compensated Temperature Limits: 32 to 122°F (0 to 50°C).
Thermal Effect: ±0.05% of F.S./°F.
Process Connection: 1/4” NPT male, 1/4” BSPT male, or 7/16” SAE.
Display: 4-digit backlit LCD (Digits: 0.60”H x 0.33” W).
Display Update: 600 ms (dampening set to 1).
Power Requirements: 12 to 28 VDC ( ) / AC ( ~ ) 50/60 Hz. (Can work at 8 VDC ( ~ ) for 45 seconds). For T5 option: 14 to 30 VDC ( ) / AC ( ~ ) 50/60 Hz.
Power Consumption: 2.5 watts.
Electrical Connections: Removable terminal blocks with two 1/2” female NPS conduit connections.
Enclosure Rating: Weatherproof type 4X IP65 (IP65 not evaluated by UL). Unit is rated weatherproof but if unit is panel mounted, panel will not maintain 4X rating.
Warm Up Time: <10 seconds.
Mounting Orientation: Any position.
Weight: 1.18 lbs (535 g).
Installation Category: II (transient over-voltage).
Pollution Degree: 2.
Altitude Limit: 6560 ft (2000 m) max.
Environment: Intended for indoor and outdoor use.
Humidity: 0 to 95% RH up to 104°F (40°C) non-condensing, 10 to 50% at 140°F (60°C) non-condensing.

SWITCH SPECIFICATIONS
Switch Type: 2 SPDT relays.
Electrical Rating: 5A @ 120/240 VAC ( ~ ) 50/60 Hz, 1A @ 28 VDC ( ).
Repeatability: ±1% of FS (switching only).
Set Points: Adjustable 0-100% of FS.
Switch Indication: External LED for each relay on the front panel.
Switch Reset: Manual or automatic.

TRANSMITTER SPECIFICATIONS
Output Signal: 4 – 20 mA, 1 - 6 VDC ( ), 1 - 5 VDC ( ), 0 - 5 VDC ( ), or 0 - 10 VDC ( )(direct or reverse output selection).
Minimum Excitation: 14 VDC ( ).
Zero and Span Adjustments: Menu scalable within the range.
Model Number Chart

<table>
<thead>
<tr>
<th>Example</th>
<th>EDA</th>
<th>EDAW-N1E1-01T0-SST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>EDA</td>
<td>Electronic Pressure Controller</td>
</tr>
<tr>
<td>Housing</td>
<td>W</td>
<td>Weatherproof</td>
</tr>
<tr>
<td>Process Connection</td>
<td>N1</td>
<td>1/4” NPT male bottom</td>
</tr>
<tr>
<td></td>
<td>B1</td>
<td>1/4” BSPT male bottom</td>
</tr>
<tr>
<td></td>
<td>A1</td>
<td>7/16” SAE male bottom</td>
</tr>
<tr>
<td>Electrical Connection</td>
<td>E1</td>
<td>Two 1/2” female NPT conduit connections</td>
</tr>
<tr>
<td>Range</td>
<td>01</td>
<td>0 – 30” Hg vacuum</td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>0 – 20 psi</td>
</tr>
<tr>
<td></td>
<td>03</td>
<td>0 – 60 psi</td>
</tr>
<tr>
<td></td>
<td>04</td>
<td>0 – 100 psi</td>
</tr>
<tr>
<td></td>
<td>05</td>
<td>0 – 150 psi</td>
</tr>
<tr>
<td></td>
<td>06</td>
<td>0 – 300 psi</td>
</tr>
<tr>
<td></td>
<td>07</td>
<td>0 – 600 psi</td>
</tr>
<tr>
<td></td>
<td>08</td>
<td>0 – 1000 psi</td>
</tr>
<tr>
<td></td>
<td>09</td>
<td>0 – 1500 psi</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>0 – 3000 psi</td>
</tr>
<tr>
<td></td>
<td>11*</td>
<td>0 – 6000 psi</td>
</tr>
<tr>
<td></td>
<td>12*</td>
<td>0 – 8000 psi</td>
</tr>
<tr>
<td>Transmitter Output</td>
<td>T0</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>T1</td>
<td>4 to 20 mA</td>
</tr>
<tr>
<td></td>
<td>T2</td>
<td>1 to 5 VDC</td>
</tr>
<tr>
<td></td>
<td>T3</td>
<td>0 to 5 VDC</td>
</tr>
<tr>
<td></td>
<td>T4</td>
<td>1 to 6 VDC</td>
</tr>
<tr>
<td></td>
<td>T5</td>
<td>0 to 10 VDC</td>
</tr>
<tr>
<td>Options</td>
<td>STW</td>
<td>Stainless Steel Tag</td>
</tr>
<tr>
<td></td>
<td>NIST</td>
<td>NIST Certificate</td>
</tr>
<tr>
<td></td>
<td>23444</td>
<td>Special Cleaning</td>
</tr>
</tbody>
</table>

*Not UL listed.

Display

The EDA has two displays: a lower larger display and a smaller upper display. The Home Display is the normal display while the control is in operation if there are no errors or functions active. The Home display will indicate the process variable at the current condition with the lower display and the selected pressure units for the process variable with the upper display. When programming the unit both displays are also used. The Programming Chart in this instruction manual indicates what both displays show while programming the unit. For programming descriptions in this instruction manual the format used is “lower display – upper display”. For example Ctrl – 1SP shows that Ctrl would be in the lower display and 1SP would be in the upper display.

When the user presses the E key to edit an item’s value the upper display will flash “EDIT” and the lower display will blink. When the user presses the E key to then save the edit to the value the upper display will flash “SAVE” and the lower display will stop blinking.
1.0 INSTALLATION

1.1 UNPACKING
Remove the EDA from the shipping carton and inspect for damage. If damage is found, notify the carrier immedi-
ately.

1.2 MOUNTING
The EDA can be pipe, panel, or surface mounted. For pipe mounting thread the unit into a mating female fitting on
the pipe. Use a wrench on the 3/4" hex at the base of the housing to tighten the unit to the mating fitting. Do not
thread the unit in by force on the housing. For panel mounting the unit fits into a 4-13/16" (122.24 mm) panel cut out.
Insert the unit into the panel opening and secure in place with the machine screws and adaptors provided with the
unit as shown in Figure 1 below. Maximum panel thickness is 1/8” (3.5 mm) with supplied screws. For surface mount-
ing, panel mount the unit into the A-370 mounting bracket (See the Dwyer catalog or website for ordering details)
also shown in Figure 1. The unit can also be directly surface mounted, as shown in Figure 2, with the proper panel
cutout for the conduit entrances. Support the pressure connection hex with a wrench if attaching a fitting to the unit
in the case of panel or flush mounting so that the pressure connection does not twist. Use a small amount of
plumber’s tape or other suitable sealants to prevent leaks around fitting.

Figure 1: Panel Mounting and Mounting in A-370 Bracket

Figure 2: Surface Mounting

Wiring
An exploded view of the circuit is shown in Figure 3. There is no external conduit or wiring connections required.
Easy plug in connections are made through the cutouts. Mark all conduit entrances with a flange or flanged cover.

Explanation of symbols:
~ Easy plug in connections
| EX | Flanged connection

Electrical connections are not recommended. Consult the Dwyer catalog or website for ordering details.
1.3 ELECTRICAL CONNECTIONS

CAUTION: POWER MUST BE OFF WHILE WIRING CONNECTIONS ARE BEING MADE.

CAUTION: Do not exceed the specified supply voltage rating. Permanent damage not covered by the warranty may result.

CAUTION: To maintain type 4X rating of the enclosure, 1/2 NPT conduit fittings must have a UL type 4X outdoor rating.

Note: Installation must be made in accordance with local codes and regulations. When fishing wire through the conduit connection do not allow the wire to touch or press on components on the boards. Damage to the circuitry may result.

Electrical connections are made to the removable terminal blocks inside the enclosure. Remove the top back cover, do not remove bottom cover. Feed stripped and tinned leads through the conduit opening and connect them as shown in Figure 3. The EDA provides two 1/2” NPT female ports for conduit connection. The conduit connections must be made such that condensation is not allowed to enter the sensor housing. If necessary install a conduit breather drain in a separate conduit body to prevent build up of moisture. It is recommended that shielded twisted pair wire be used for the transmitter output option if the potential exists for interference from external noise sources. When replacing top back cover tighten screws to 2 ± .25 in. lbs.

Figure 3: Wiring

An external power supply of 12-28 VDC/AC with minimum current capability of 200 mA must be used to power the unit. The power supply connection is not polarity sensitive so the positive and negative connections may be made to either terminal of CONN9 terminal block.

For voltage output option, connect the voltage receiver (-) to terminal 1 and voltage receiver (+) to terminal 2 of the CONN10 terminal block.

For current output option, connect the current receiver (-) to terminal 3 and current receiver (+) to terminal 4 of CONN10 terminal block. DO NOT APPLY EXTERNAL POWER TO CONN10 TERMINALS - PERMANENT DAMAGE NOT COVERED BY WARRANTY WILL RESULT.

Loads can be connected to connectors CONN7 and CONN8 terminal blocks based on the Control settings:

- For single set point mode (Ctrl-1SP), connect the Load to SP1 relay (CONN7).
- For two set points mode (Ctrl-2SP), connect the Load1 to SP1 relay (CONN7) and Load2 to SP2 relay (CONN8).
- For single set point and alarm mode (Ctrl-SPAL), connect the Load1 to SP1 relay (CONN7) and Load2 to ALARM relay (CONN8).

Wiring

An external switch or circuit breaker should be added during the installation as a disconnecting device. The switch or circuit breaker must meet the requirements of IEC 60947-1 and IEC 60947-3, shall disconnect all current carrying conductors, and shall not interrupt the protective earth ground. The disconnecting switch or circuit breaker must be marked or labeled with the symbols “I” for on and “O” for off, per IEC 60417-5007 & IEC 60417-5008 and shall be marked as “Disconnecting Device”. Do not position the PLS in a space where it is difficult to operate the disconnecting device that provides power. 300V @ 90°C 18 AWG/0.75 mm² wiring with PVC or equivalent insulation with 94-V0 or FV-0 flammability rating is recommended for the switch outputs and power. Terminal blocks rated for 16-22 solid or stranded copper conductor. 6 lb in is suggested tightening torque.

WARNING As a permanently installed piece of equipment, a power disconnect switch, circuit breaker, or other approved disconnect device must be installed in close proximity to the installed board and within easy reach of the operator. This disconnect device must include a label indicating its function as a mains disconnect. A circuit breaker or fuse device is recommended (see Figure 3).

Explanation of Symbols:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Publication</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>~</td>
<td>IEC 50417 - 5031</td>
<td>Direct current</td>
</tr>
<tr>
<td>~</td>
<td>IEC 50417 - 5032</td>
<td>Alternating current</td>
</tr>
<tr>
<td>↓</td>
<td>IEC 50417 - 5019</td>
<td>Protective conductor terminal</td>
</tr>
<tr>
<td></td>
<td>IEC 50417 - 5007</td>
<td>On (supply)</td>
</tr>
<tr>
<td>⊗</td>
<td>IEC 50417 - 5008</td>
<td>Off (supply)</td>
</tr>
</tbody>
</table>
2. OPERATING INSTRUCTIONS

2.1 FRONT PANEL & KEY FUNCTIONS

Figure 4: Front Panel Functions

<table>
<thead>
<tr>
<th>HOME POSITION FUNCTION</th>
<th>MAIN MENU FUNCTION</th>
<th>ITEM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP1</td>
<td>Sequences the display through SET POINT and ALARM settings</td>
<td>Return to home position</td>
</tr>
<tr>
<td>MENU</td>
<td>Allows access to the menus</td>
<td>Return to previous menu</td>
</tr>
<tr>
<td>UP ARROW</td>
<td>Sequences through menus</td>
<td></td>
</tr>
<tr>
<td>DOWN ARROW</td>
<td>Sequences through menus</td>
<td></td>
</tr>
<tr>
<td>ENTER</td>
<td>Displays full scale range of unit</td>
<td>Enter into items</td>
</tr>
<tr>
<td>RST</td>
<td>Clears or resets an Alarm (alarm set for manual reset)</td>
<td></td>
</tr>
</tbody>
</table>
2.2 SET POINTS & ALARMS

Setting Set Points and Alarms

The hot key provides direct access to the Set Point and Alarm settings. The Set Point and Alarm settings that are displayed are based upon the Control (CtrL) menu item.

Set Point Adjustment

Adjusting the set points is quick and simple. Instead of setting a set point and dead band, simply adjust SP1H, Set Point 1 High, and SP2H, Set Point 2 High, for the desired relay turn on point, and then adjust SP1L, Set Point 1 Low, and SP2L, Set Point 2 Low, for the desired relay turn off point.

In the above graph, an instrument with a 100 psi range would have the SP1 relay turn ON at 80 psi and OFF at 40 psi. SP1H sets the relay turn ON point, and SP1L sets the relay turn OFF point.
Relay Action

The relays outputs normally function in the direct acting mode, which means the relays turn ON with an increase in pressure. SP1 and SP2 may be configured to act as reverse acting relays (refer to the Ctrl menu item). When set for reverse acting, SP1H and SP2H set the relay turn OFF point, and SP1L and SP2L set the relay turn ON point. The above graph demonstrates direct and reverse action on process (pressure) change.

Alternating (Lead/Lag) Operation
The EDA is designed to easily operate a pair of pumps in an alternating operation to minimize pump wear. The unit has programmable on and off set points for pump one and two. If the lead/lag feature is turned off then the relays remain attached to their corresponding set points, SP1H and SP1L control relay 1 (pump 1) and SP2H and SP2L control relay 2 (pump 2). There is no alternating function.

If lead/lag feature is turned on then the relays will alternate with set points SP1H and SP1L to SP2H and SP2L with every cycle of set points. The last relay turned off will be last relay turned on with the next cycle. On the first cycle on increase of pressure, assuming direct acting, the SP1 relay (pump 1) will come on and then on further increase of pressure the SP2 relay (pump 2) will come on. On the subsequent decrease of pressure the SP2 relay (pump 2) will come off and then the SP1 relay (pump 1) will come off. When pressure increases on the next cycle with the relay used on the last cycle for SP2 will now be used for SP1, so that SP1 now controls pump 2 and SP2 now controls pump 1. Even if SP2 is not used on the pressure cycle the relays still alternate on next cycle.
2.3 PROGRAMMING CHART

MENU MAP
SEE PAGE 17.
2.4 MAIN MENU SELECTIONS

Menu Selections
Press the MENU button to start the menu so that the upper right displays reads MENU. Press the ▼ key to advance to the next menu item. You can press the ▲ key to go back to the previous menu. Press the E key to enter a menu.

SECr  Security Menu
Lock out access to set point and alarm settings, or lock out access to all settings.

OPEr  Operation Menu
Select pressure units, zero the display, and turn the backlight on or off.

Out   Output Menu
Select relay mode of operation, alternating function, time delay, and lamp indication.

dIS   Display Menu
Monitor and adjust display related settings: Peak, Valley and Dampening.

AdU   Advanced Functions Menu
Modify advanced function parameters: transmitter output scaling, direct or reverse output setting, calibration, or restoring factory default calibration.

tESl  Test Menu
Simulate input over the range without pressure to test switch and transmitter output function.

FAIL  Failsafe Menu
Set the relay and transmitter outputs to certain preset values when failsafe conditions occur. Error codes will show on the display indicating the problem. User chooses if relay is de-energized, energized, or no action taken. With transmitter option, user chooses an output of 3.6 mA, 22 mA, or no action taken.

Menus and Values

SECr  Security Menu

SECr  When the security item is selected, the present security level is displayed in the upper right hand display. To change the security level, adjust the number displayed to the password value in the Password Table, shown below, by pressing the ▲ or ▼ key and then pressing the E key at the desired security level.

<table>
<thead>
<tr>
<th>Security Level Displayed</th>
<th>Access</th>
<th>Password Value to Enter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All menus access</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Menu Access</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>SP/AL Locked</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>All settings locked</td>
<td>111</td>
</tr>
</tbody>
</table>

The password values shown in the table cannot be altered, so retain a copy of these pages for future reference.
OPEr Operation Menu

Unit Pressure Units
With the display reading Unit - PSI, press the E key. The upper display will blink. Press the ▼ key to change unit then press E key to save the new unit.

PSI Pounds per square inch
FS % of full scale
OZIN Ounces per square inch
CMWC Centimeters of water column
MPA Megapascals
BAR Bar
MBAR Millibar
KPA Kilopascals
FTWC Feet of water column
KGCM Kilograms per square centimeter
MMHG Millimeters of mercury
INWC Inches of water column
INHG Inches of mercury

Pressure Range vs. Available Units

<table>
<thead>
<tr>
<th>PSI</th>
<th>KG/CM2</th>
<th>BAR</th>
<th>INHg</th>
<th>FTWC</th>
<th>KPA</th>
<th>MPA</th>
<th>INWC</th>
<th>MBAR</th>
<th>CMWC</th>
<th>MMHg</th>
<th>OZ/IN2</th>
<th>% FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>-14.7</td>
<td>-1.033</td>
<td>-1.013</td>
<td>-29.93</td>
<td>-33.94</td>
<td>-101.4</td>
<td>-0.101</td>
<td>-407.3</td>
<td>-1013</td>
<td>1379</td>
<td>-1663</td>
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<td>-1663</td>
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<td>320.0</td>
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<td>60.0</td>
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<td>122.2</td>
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<td>3105</td>
<td>0.414</td>
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<td>1.034</td>
<td>2.068</td>
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<td>960</td>
<td>100</td>
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<td>2.068</td>
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<td>300.0</td>
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<td>692</td>
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<td>600</td>
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<td>1000</td>
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<td>1500</td>
<td>105.5</td>
<td>103.4</td>
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<td>3460</td>
<td>20.68</td>
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<tr>
<td>3000</td>
<td>210.9</td>
<td>206.8</td>
<td>611</td>
<td>692</td>
<td>3054</td>
<td>41.4</td>
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<tr>
<td>6000</td>
<td>422</td>
<td>414</td>
<td>1222</td>
<td>1384</td>
<td>2036</td>
<td>55.1</td>
<td>100</td>
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<td>100</td>
<td>100</td>
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</tr>
<tr>
<td>8000</td>
<td>562</td>
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<td>2036</td>
<td>2307</td>
<td>3054</td>
<td>41.4</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

ZERO Auto Zero
Note: DO NOT apply any pressure when performing this function. With the display reading xx - ZERO, press the E key. The upper display will blink. Press E again to zero the display. The display will read 0.0 if the zero offset is less than ±5% of full scale.

bCLt Backlight
ON Backlight always on.
OFF Backlight always off.
30 Backlight stays on for 30 minutes.
10 Backlight stays on for 10 minutes.
5 Backlight stays on for 5 minutes.
2 Backlight stays on for 2 minutes.
Out Output Menu

Control Mode
1SP Single set point.
2SP Two fully independent set points.
SPAL Single set point and alarm.

1SP SP1, Set Point 1, Reverse or Direct Acting
DIR Direct. Relay turns on with increasing pressure.
REV Reverse. Relay turns on with decreasing pressure.

DEL1 SP1, Set Point 1, Time Delay
Sets the amount of time a set point condition must be continuously met before the set point condition is recognized. The DEL1 delay is adjustable from 0-60 seconds.

LED1 SP1, Set Point 1, Lamp
OFF The SP1 LED on the front panel turns OFF when the SP1 relay turns OFF.
The SP1 LED on the front panel turns ON when the SP1 relay turns ON.
ON The SP1 LED on the front panel turns OFF when the SP1 relay turns OFF.
The SP1 LED on the front panel turns ON when the SP1 relay turns ON.

The following SP2 function values are only activated when CtrlL is set to 2SP:

2SP SP2, Set Point 2, Reverse or Direct Acting
DIR Direct. Relay turns on with increasing pressure.
REV Reverse. Relay turns on with decreasing pressure.

DEL2 SP2, Set Point 2, time delay
Sets the amount of time a set point condition must be continuously met before the set point condition is recognized. The DEL2 delay is adjustable from 0-60 seconds.

LED2 SP2, Set Point 2, Lamp
OFF The SP2 LED on the front panel turns OFF when the SP2 relay turns OFF.
The SP2 LED on the front panel turns ON when the SP2 relay turns ON.
ON The SP2 LED on the front panel turns OFF when the SP2 relay turns OFF.
The SP2 LED on the front panel turns ON when the SP2 relay turns ON.

LdL9 Relay Alternation (See page 8)
OFF There is no alternating function.
ON Relays will alternate with set points SP1H/L and SP2H/L with every cycle of set points. 2SP control mode only.
The following alarm function menu items are activated when Ctrl is set to SPAL:

**DELA**  
Alarm Delay  
Sets the amount of time an alarm condition must be continuously met before the alarm condition is recognized. The alarm delay is adjustable from 0 - 60 seconds.

**LEdA**  
Alarm Lamps  
OFF  
The ALLO LED or ALHI LED on the front panel turns OFF when the alarm relay turns OFF. The ALLO LED or ALHI LED on the front panel turns ON when the alarm relay turns ON.

ON  
The ALLO LED or ALHI LED on the front panel turns ON when the alarm relay turns OFF. The ALLO LED or ALHI LED on the front panel turns OFF when the alarm relay turns ON.

**AL**  
Alarm Type (see Alarm Adjustment below)  
HIGH  
High alarm only.

LOW  
Low alarm only.

HILO  
For a high and low guard band type alarm. Share the same relay output.

**Alarm Adjustment**  
Alarm settings are dependent upon the selected alarm type. The EDA pressure controller alarm may be configured as a High Alarm, Low Alarm, or High/Low Alarm. Alarm settings may be set to anywhere within the range of the instrument. The dead bands of the alarms are fixed at 1% of full scale.

**ALrE**  
Alarm Reset  
AUTO  
Automatic reset.

HOLD  
Manual reset. An alarm is reset by pressing the RST key on the front panel.

**ALiH**  
Low Alarm Inhibit  
OFF  
Alarm inhibit is off.

ON  
Alarm inhibit is on.

Note: If ALiH is selected ON, a low alarm condition is suspended upon power up until the process value passes through the alarm set point once.
diS Display Menu

**PEAK**

Peak
The Peak feature stores the highest pressure reading the instrument has measured since the last reset or power up. At power up PEAK is reset to the present pressure reading. To manually reset the PEAK value, press the RST (RESET) key while in PEAK.

**VALY**

Valley
The Valley feature stores the lowest pressure reading the instrument has measured since the last reset or power up. At power up VALY is reset to the present pressure reading. To manually reset the VALY value, press the RST (RESET) key while in VALY.

**DAMP**

Dampening
Adjust from 1-15. Dampening stabilizes the display from instabilities due to things such as vibration and excessive pressure fluctuations. The dampening setting adjusts the amount of readings that are averaged for each display update. Adjust the dampening value until the display reads a stable value for the application.

AdU Advanced Menu

**POL**, Process Output Low, and **POH**, Process Output High are used to scale the transmitter output for a unit with the output option of 4 to 20 mA, 0-5 VDC, 0-10 VDC, 1-5 VDC, or 1-6 VDC. Below shows with 4 to 20 mA output option.

**POL**

Process Output Low
Set to the desired display reading for the 4 mA output. May be set from 2% below minimum scale up to **POH**.

**POH**

Process Output High
Set to the desired display reading for the 20 mA output. May be set from **POL** to 2% above maximum scale.

**CAL – ZERO**

Zero Calibration
DO NOT apply any pressure when performing this function. With the display reading CAL - ZERO, press the E key. The upper display will blink. Press the E key again to complete the zeroing of the instrument or press the MENU key to cancel.

**CAL – FS**

Full-scale Calibration
With the display reading CAL - FS, apply full-scale pressure to the unit, press the E key. The upper display will blink. Press the E key again to complete the calibration or press the MENU key to cancel.

**trAn** sets the transmitter output option function for a unit with the output option of 4 to 20 mA, 0-5 VDC, 0-10 VDC, 1-5 VDC, or 1-6 VDC. Below shows with 4 to 20 mA output option.

**trAn**

**DIR**

Direct Output. 4 mA output at zero, 20 mA output at full scale pressure.

**REV**

Reverse Output. 20 mA output at zero, 4 mA output at full scale pressure.

**CAL - DFLT**

Factory Default Calibration
With the display reading CAL - DFLT, press the E key. The upper display will blink. Press E again to restore the original factory calibration values or press the MENU key to cancel.
tEST Test Menu

When selected the unit simulates a pressure input over the range to test the programming and output function. To start an automatic simulated cycling through the pressure range press the E key. This test will run continually until the E key is pressed again. To manually adjust the simulated pressure press the ▲ or ▼ key to adjust the pressure value. To exit tEST press the MENU key.

FAIL Failsafe Menu

The Failsafe menu is used to set the relay and transmitter outputs to certain preset values when failsafe conditions occur. Error codes will show on the display indicating the problem. See Diagnostic Error Messages on the next page.

rEL Relay Output Failsafe Condition
- OPEN The relay is de-energized upon failsafe condition. The NO contacts will be open, and the NC contacts will be closed.
- CLSE The relay is energized upon failsafe condition. The NO contacts will be closed, and the NC contacts will be opened.
- NORM No change applied to the relay upon failsafe condition.

OUTP sets the transmitter output option failsafe condition for a unit with the output option of 4 to 20 mA, 0-5 VDC, 0-10 VDC, 1-5 VDC, or 1-6 VDC. See below chart of transmitter output action according to output signal type.

OUTP Transmitter Output Failsafe Condition
- LOW Transmitter output goes to low failsafe condition.
- HIGH Transmitter output goes to high failsafe condition.
- NORM No change applied to transmitter output upon failsafe condition.

<table>
<thead>
<tr>
<th>Output signal</th>
<th>4-20 mA</th>
<th>0-5 VDC</th>
<th>0-10 VDC</th>
<th>1-6 VDC</th>
<th>1-5 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td>3.6 mA</td>
<td>-0.125 VDC</td>
<td>-0.250 VDC</td>
<td>0.875 VDC</td>
<td>0.9 VDC</td>
</tr>
<tr>
<td>HIGH</td>
<td>22 mA</td>
<td>5.625 VDC</td>
<td>11.250 VDC</td>
<td>6.625 VDC</td>
<td>5.5 VDC</td>
</tr>
</tbody>
</table>

FrEs Failsafe reset
- AUTO Automatic reset - Failsafe is reset automatically when the failsafe error condition is removed.
- HOLD Manual reset - Failsafe is reset when the MENU key is pressed.
4. DIAGNOSTIC ERROR MESSAGES

<table>
<thead>
<tr>
<th>Display</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Err1</td>
<td>Low temperature limit</td>
</tr>
<tr>
<td></td>
<td>A temperature below 0°F has been applied to</td>
</tr>
<tr>
<td></td>
<td>the sensor</td>
</tr>
<tr>
<td>Err2</td>
<td>High temperature limit</td>
</tr>
<tr>
<td></td>
<td>A temperature above 180°F has been applied</td>
</tr>
<tr>
<td></td>
<td>to the sensor</td>
</tr>
<tr>
<td>Err3</td>
<td>Sensor failure</td>
</tr>
<tr>
<td></td>
<td>The micro-controller is receiving invalid</td>
</tr>
<tr>
<td></td>
<td>signal from the sensor</td>
</tr>
<tr>
<td>Err4</td>
<td>Over pressure limit</td>
</tr>
<tr>
<td></td>
<td>Proof pressure have been exceeded</td>
</tr>
<tr>
<td>Err5</td>
<td>Keypad short</td>
</tr>
</tbody>
</table>

5. MAINTENANCE/REPAIR

Upon final installation of the Series EDA, inspect and clean with water or damp cloth at regular intervals. The Series EDA is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty.

6. WARRANTY/RETURN

Refer to “Terms and Conditions of Sales” in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.